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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/743,849

03/08/2001

Masao Komai

KOMAI-4

8746

1444

7590

10/02/2002

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WASHINGTON, DC 20001-5303

EXAMINER

AHMED, SHEEBA

ART UNIT	PAPER NUMBER
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1773

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DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/743,849

Applicant(s)

KOMAI ET AL.

Examiner

Sheeba Ahmed

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) 5-8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claims 5-8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim shall not serve as a basis for any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, claims 5-8 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3/1 are rejected under 35 U.S.C. 102(b) as being anticipated by Nomura et al. (US 5,049,245).

Nomura et al. disclose a resin-coated rustproof steel plate (***corresponding to the resin coated steel sheet of the claimed invention***) (Column 1, lines 8-10). The steel plate is a zinc or zinc-alloyed steel sheet (***thus meeting the limitations that the steel plate is galvanized given that galvanizing, by definition, is coating with a zinc layer***) (Column 2, line 21) that has first been subjected to a chromate treatment (***corresponding to the surface treatment of the claimed invention and hence meeting the limitations that the steel sheet is colored given that the presence of***

chromate ions, from the chromate treatment, impart a color to the sheet) and then coated with a paint (Column 4, lines 1-15) wherein the paint is an acrylic or urethane resin (**corresponding to the organic resin layer of the claimed invention and meeting the limitations of claim 3**) (See claim 7). All limitations of claims 1 and 3/1 are disclosed in the above reference.

3. Claims 1, 2, 3/1 and 3/2 are rejected under 35 U.S.C. 102(b) as being anticipated by Sujita et al. (US 5,723,210).

Sujita et al. disclose an organic composite coated steel sheet (**corresponding to the resin coated steel sheet of the claimed invention**) (Column 1, lines 7-9) wherein the steel sheet is coated with a zinc or zinc based alloy coating sheet (**thus meeting the limitations that the steel plate is galvanized given that galvanizing, by definition, is coating with a zinc layer**) (Column 4, lines 29-32), a chromate film applied to the zinc coating (**corresponding to the surface treatment of the claimed invention and hence meeting the limitations that the steel sheet is colored given that the presence of chromate ions, from the chromate treatment, impart a color to the sheet**), and a resin coating film formed on the chromate film (**corresponding to the organic resin layer of the claimed invention**) (Column 3, lines 1-15). The resin coating film comprises a resin and a water-dispersed silica (**corresponding to the silica of the claimed invention**) (Column 3, lines 11-13). The resin may be an acrylic resin, a polyester resin or a urethane resin (**thus meeting the limitations of claim 3**) (Column 7, lines 8-12). All limitations of claims 1-3 are disclosed in the above reference.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 2, 3/1, and 3/2 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagai et al. (US 6,143,422).

Nagai et al. disclose a steel sheet (***corresponding to the resin coated steel sheet of the claimed invention***) coated with a zinc plating layer (***thus meeting the limitations that the steel plate is galvanized given that galvanizing, by definition, is coating with a zinc layer***) (Column 4, lines 65-67 and column 5, lines 1-5), a chromate treatment (***corresponding to the surface treatment of the claimed invention and hence meeting the limitations that the steel sheet is colored given that the presence of chromate ions, from the chromate treatment, impart a color to the sheet***) on the plating layer, and a paint layer (Column 9, lines 54-60). The paint layer is a thin resin coating layer (***corresponding to the organic resin layer of the claimed invention***) and comprises a resin such as an acrylic resin, a polyester resin or a urethane resin (***thus meeting the limitations of claim 3***) and an inorganic pigment such as silica (Column 10, lines 6-36). The silica is colloidal silica (***corresponding to the silica of the claimed invention***) (Column 11, lines 12-14). All limitations of claims 1-3 are disclosed in the above reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura et al. (US 5,049,245) in view of Smith et al. (US 6,136,941).

Nomura et al. disclose a resin-coated rustproof steel plate (**corresponding to the resin coated steel sheet of the claimed invention**) (Column 1, lines 8-10). The steel plate is a zinc or zinc-alloyed steel sheet (**thus meeting the limitations that the steel plate is galvanized given that galvanizing, by definition, is coating with a zinc layer**) (Column 2, line 21) that has first been subjected to a chromate treatment (**corresponding to the surface treatment of the claimed invention and hence meeting the limitations that the steel sheet is colored given that the presence of chromate ions, from the chromate treatment, impart a color to the sheet**) and then coated with a paint (Column 4, lines 1-15) wherein the paint is an acrylic or urethane resin (**corresponding to the organic resin layer of the claimed invention and meeting the limitations of claim 3**) (See claim 7).

Nomura et al. do not specifically disclose that their urethane resin has the claimed pencil hardness, tensile strength or extension ratio, i.e., elongation.

However, Smith et al. disclose an aqueous polyurethane dispersion having a higher modulus and that may be used to coat cold rolled steel plates and having the an

Art Unit: 1773

elongation of 290%, a tensile strength of 5800 psi, and a pencil hardness of 1H (See Tables 1-7) **(thus meeting the pencil hardness, tensile strength and extension ratio limitations of claim 4).**

Accordingly, it would have been obvious to one having ordinary skill in the art to use a urethane resin having the claimed pencil hardness, tensile strength and extension ratio, i.e., elongation, in a resin coated steel sheet given that Smith et al. teach that such a resin has a higher modulus and is desirable in coating steel sheets.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sujita et al. (US 5,723,210) in view of Smith et al. (US 6,136,941).

Sujita et al. disclose an organic composite coated steel sheet **(corresponding to the resin coated steel sheet of the claimed invention)** (Column 1, lines 7-9) wherein the steel sheet is coated with a zinc or zinc based alloy coating sheet **(thus meeting the limitations that the steel plate is galvanized given that galvanizing, by definition, is coating with a zinc layer)** (Column 4, lines 29-32), a chromate film applied to the zinc coating **(corresponding to the surface treatment of the claimed invention and hence meeting the limitations that the steel sheet is colored given that the presence of chromate ions, from the chromate treatment, impart a color to the sheet)**, and a resin coating film formed on the chromate film **(corresponding to the organic resin layer of the claimed invention)** (Column 3, lines 1-15). The resin coating film comprises a resin and a water-dispersed silica **(corresponding to the silica of the claimed invention)** (Column 3, lines 11-13). The resin may be an acrylic

Art Unit: 1773

resin, a polyester resin or a urethane resin (***thus meeting the limitations of claim 3***) (Column 7, lines 8-12).

Sujita et al. do not specifically disclose that their urethane resin has the claimed pencil hardness, tensile strength or extension ratio, i.e., elongation.

However, Smith et al. disclose an aqueous polyurethane dispersion having a higher modulus and that may be used to coat cold rolled steel plates and having the an elongation of 290%, a tensile strength of 5800 psi, and a pencil hardness of 1H (See Tables 1-7) (***thus meeting the pencil hardness, tensile strength and extension ratio limitations of claim 4***).

Accordingly, it would have been obvious to one having ordinary skill in the art to use a urethane resin having the claimed pencil hardness, tensile strength and extension ratio, i.e., elongation, in a resin coated steel sheet given that Smith et al. teach that such a resin has a higher modulus and is desirable in coating steel sheets.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nagai et al. (US 6,143,422) in view of Smith et al. (US 6,136,941).

Nagai et al. disclose a steel sheet (***corresponding to the resin coated steel sheet of the claimed invention***) coated with a zinc plating layer (***thus meeting the limitations that the steel plate is galvanized given that galvanizing, by definition, is coating with a zinc layer***) (Column 4, lines 65-67 and column 5, lines 1-5), a chromate treatment (***corresponding to the surface treatment of the claimed invention and hence meeting the limitations that the steel sheet is colored given***

Art Unit: 1773

Conclusion


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (703)305-0594. The examiner can normally be reached on Mon-Fri 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703)308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-5408 for regular communications and (703)305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5665.

SAH

Sheeba Ahmed
September 25, 2002


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700